

Generation Grid Integration for Regional Plants

Project Description

AES Southland's Alamitos, Huntington Beach and Redondo Beach projects are natural gas power plants that were built between the late 1950s and 1967 in Western Los Angeles (LA) Basin – California, USA. These generating plants were providing a reliable source of electricity to local residents and the region for more than 50 years; Alamitos generates 1,956 MW of electricity whereas Huntington Beach and Redondo Beach generate 450 MW and 1,310 MW respectively.

Recent changes to California environmental law require power plants to significantly reduce the use of ocean water for cooling; this is accomplished by retiring existing Once Through Cooling (OTC) units, including AES Southland projects. This has driven AES Southland to retire the aging facilities and replace them with modern natural gas power plants that are more efficient and responsive to California's electricity needs.



Need

EPE has provided AES Southland with consulting services since 2010, guiding them in making business decisions related to transmission efficacy of the Alamitos, Huntington Beach and Redondo Beach projects.

EPE completed steady-state (thermal, voltage and power factor) and short circuit (SCD) as well as post transient stability analyses for several scenarios as part of a Due Diligence to determine the possible alternatives for AES Southland to repower their existing OTC units at the three sites in the LA Basin area by 2020.

EPE also guided AES Southland through the CAISO interconnection process and kept updates on the GIA processes as well as on the protocols and tariffs of CAISO. As part of this support, EPE also assisted AES Southland in the design of the reported units.

Results

- These analyses served as indicative material in the Testimony that EPE and AES Southland put together to the California Public Utilities Commission (CPUC).
- In this campaign, our president, Hala Ballouz, testified before the CPUC and demonstrated that repowering of AES Southland is needed to reliably serve the Western LA Basin area.

Client Testimony:

“AES has found EPE to be incredibly professional, informed, flexible, responsive and knowledgeable. They are able to work under extreme time pressure, are very diligent and thorough and a pleasure to engage with.”